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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,328	12/14/2001	Mario Tenuta	2527-1A1	1143

7590            12/28/2004

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EXAMINER

NAFF, DAVID M

ART UNIT            PAPER NUMBER

1651

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/017,328	TENUTA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David M. Naff	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 June 2004 and 28 September 2004.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2 and 5 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2 and 5 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

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**DETAILED ACTION**

Amendments of 6/22/94 and 9/28/04 amended claims 2 and 5.

Claims examined on the merits are 2 and 5, which are all claims in the application.

5 The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

10 Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blodgett et al in view of Cooley (6,300,282 B1) and Schisler et al (5,783,411), and if necessary in further view of Menzies et al for reasons set forth in the previous office action of 4/22/04 and for reasons herein.

15 The claims are drawn to a method of controlling soilborne pathogens in soil having a carbon content of less than 1.7% by weight by generating ammonia by adding a nitrogen containing material and an agent to raise the pH of the soil to above 8.5. Claim 5 requires the agent for raising the pH to be selected from agents including calcium hydroxide.

20 Blodgett et al disclose (page 271, Figure 2, and page 272) that as pH increased from 7.2 to 9.2, the amount and severity of scab decreased when growing potatoes in sandy loam soil. Additionally, when a soil heavily infected with potato scab is limed ( $\text{Ca(OH)}_2$ ) to raise the pH to 8.5, 47% of potatoes were clean, and when limed to pH 9.0, 91% of the potatoes were clean.

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Cooley discloses (col 1, lines 34-45) providing nitrogen to potato plants by dripping liquid urea ammonium nitrate of 28-32% nitrogen onto sides of the potato hill or applying granular urea ammonium nitrate onto sides of the potato hill, and repeating this process in 7-10 days later. After this, liquid urea ammonium nitrate may be sent through irrigation water.

Schisler et al disclose (col 8, line 64) sandy clay loam field soil for growing potatoes having an organic matter content of 1.3%.

Menzies et al disclose (page 968, second full paragraph) that in greenhouse experiments with alkaline soil, potato scab decreased with increasing pH or lime in direct contrast to scab behavior in acid soils. When adding calcium oxide and using sandy loan soil, control was obtained when the pH was above 8.1. When making soil alkaline with sodium carbonate and treating with calcium compounds, scab control was best with calcium sulfate. Results indicated that scab in alkaline soil corresponded to both calcium and pH, and when the pH is raised above 8.0, control of scab varies with the source of calcium.

When growing potatoes in soil limed to a pH 9.0 as suggested by Blodgett et al, it would have been obvious to apply liquid or granular urea ammonium nitrate to the soil to supply nitrogen as suggested by Cooley when growing potatoes to increase potato yield. The added ammonium nitrate will inherently generate ammonia. The sandy loan soil of Blodgett et al will inherently contain less than 1.7% carbon content as suggested by Schisler et al disclosing sandy clay loam field soil for growing potatoes having an organic matter content of

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1.3%. If needed, Menzies et al would have further suggested an alkaline pH soil having less than 1.7% carbon content for potatoes, from disclosing growing potatoes in alkaline sandy loan soil.

***Response to Arguments***

5       Applicant urges that Blodgett et al does not disclose a carbon content of below 1.7%, and that sandy loan soil can contain a higher carbon content. However, Schisler et al support that the carbon content is below 1.7%. Even if the content can be above 1.7%, this would appear only occur rarely and not be typical.

10      Applicants urge that Cooley does not suggest adding nitrogen in combination with other ingredients. However, Cooley is combined with Blodgett et al, and it would have been obvious to added nitrogen as suggested by Cooley when potatoes are grown in the limed soil of Blodgett et al for the same reason it is added to any other soil, i.e. 15 to increase yield, which is sufficient motivation. There is seen nothing to lead one to believe the combination cannot be made.

***Conclusion***

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20      A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the 25 shortened statutory period will expire on the date the advisory action

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is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5 Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is 571-272-0920. The examiner can normally be reached on Monday-Friday 9:30-6:00.

0 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David M. Naff  
Primary Examiner  
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